

**Six degree of freedom hand controller**

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**Abstract**

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The invention relates to a 6 degree of freedom hand controller. The hand controller includes a handgrip member which is substantially spherical in shape and which includes a point disposed substantially centrally of the member. An elongated shaft member supports the handgrip member such that the handgrip member is rotatable, from an initial position, about the point. The rotational motion of the handgrip member about the point is resolvable into motion about a pitch axis, passing through the point, a roll axis at right angles to the pitch axis and also passing through the point, and a yaw axis, at right angles to both the pitch axis and the roll axis and also passing through the point. The elongated shaft member is movably supported such that the handgrip member is movable, from the initial position, in translational motion resolvable into motion along the pitch, roll and yaw axes and through the point. Whereby, the rotational motion of the member comprises motion of the member about the point, and, whereby, the effective lines of thrust of the translational motion of the member pass through the point.

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